

June 12, 1948.

Dr. R. B. Oesting,
Research Director,
Paul-Lewis Labs.,
4253 No. Pt. Washington Rd.,
Milwaukee 12, Wisconsin.

Dear Dr. Oesting,

You may recall my earlier request for a sample of your T-Z reagent. We have been working with this compound as a possible reagent for the detection of bacterial mutants whose redox capacities were altered due to changes in their capacity to utilize various substrates, e.g. succinate. This has not worked out so well, probably because it will be impossible to vary the reducing potential of the organisms appreciably and still allow growth. Another promising aspect has, however, arisen- namely the application of T-Z as a pH indicator, analagous to the use of Levine's EosinMethylene Blue Lactose Agar, with which medium fermenters of lactose are distinguished by turning black, due to the acid they produce. On T-Z nutrient agar, the reverse picture is found, fermenters remaining colorless while non-fermenters turn deep red, presumably due to the pH dependence of the formazan formation. This would be very useful in bacteriological determination of Salmonella in fecal examination. With the FMB and similar media, the Salmonella are light against a background of dark-stained E. coli colonies, and are not difficult to miss, while bright red colonies of Salmonella on a light pink background would be easily found. The main limitation, as I see it, would be the probable cost of the reagent. Used at 1 gram/ 10 liters, it would have to compete with EMB at a cost, for the dyes, of about 50¢/10 l. Can you give me any suggestion as to the probable retail cost of T-Z ?

Sincerely yours,